IN THE CLAIMS:

Please amend the claims as follows:

1. (Previously Canceled) Superconducting cable comprising at least one layer of tapes of superconducting material circumferentially wound side by side on a support at a prefixed distance so as gaps are circumferentially formed among adjacent tapes, wherein non-superconducting material in a shape of selected from wires and tapes, is interposed between adjacent tapes to partially fill said gaps.

2. (Previously Canceled) Superconducting cable according to claim 1 comprising a phase conductor including at least a first layer of tapes of superconducting material circumferentially wound side by side on a support at a prefixed distance so as gaps are circumferentially formed among adjacent tapes, and a return conductor including at least a second layer of tapes of superconducting material, as return conductor circumferentially wound on a support side by side at a prefixed distance so as gaps are circumferentially formed among adjacent tapes, wherein the non-superconducting material is present among the tapes of superconducting material of the return conductor.

3. (Previously Canceled) Superconducting cable according to claim 2 wherein the non-superconducting material among the tapes of superconducting material of both the phase and return conductor.

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4. (Previously Canceled) Superconducting cable according to claim 1 wherein the non-superconducting material is in form of tapes.

5. (Previously Canceled) Superconducting cable according to claim 1 wherein the non-superconducting material has a thickness differing from that of the tapes of the supercondcucting material of an amount not higher than +/- 15%.

6. (Previously Canceled) Superconducting cable according to claim 6 wherein the non-superconducting material has a thickness differing from that of the tapes of the superconducting material of an amount not higher than +/- 10%.

7. (Previously Canceled) Superconducting cable according to claim 7 wherein the non-superconducting material has a thickness differing from that of the tapes of the superconducting material of an amount not higher than +/- 5%.

8. (Previously Canceled) Superconducting cable according to claim 8 wherein the non-superconducting material has a thickness substantially equal to that of the tapes of the superconducting material.

9. (Previously Canceled) Superconducting cable according to claim 1 wherein the width of the nonsuperconducting material is such that a gap of 0.1-3 mm remains between a tape of superconducting material and the adjacent non-superconducting material.

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10. (Previously Canceled) Superconducting cable according to claim 9 wherein the remaining gap is of 0.1-2mm.

11. (Previously Canceled) Superconducting cable according to claim 1 wherein the non-superconducting material is of plastic, metal or a combination thereof.

12. (Previously Canceled) Superconducting cable according to claim 11 wherein the metal has amagnetic characteristics at the operative temperature.

13. (Previously Canceled) Superconducting cable according to claim 12 wherein the metal s copper, silver, and gold or alloys thereof.

14. (Previously Canceled) Superconducting cable according to claim 13 wherein the metal is copper.

15. (Previously Canceled) Superconducting cable according to claim 1 wherein the non-superconducting material is longitudinally wound on the support or on the underlying superconducting layer, and alternated with the tapes of superconducitng material.

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16. (Previously Withdrawn) Method for minimizing mechanical stresses to tapes of superconducting material circumferentially wound side by side on a support at

a prefixed distance so as gaps are circumferentially formed among adjacent tapes, comprising the phase of interposing a non-superconducting material in a shape of a selected from wires and tapes between adjacent tapes to partially fill said gaps.

17. (Previously Withdrawn) Method for producing a superconducting conductor comprising at least one layer of superconducting tapes circumferentially wound side by side on a support at a prefixed distance so as gaps are circumferentially formed among adjacent tapes, wherein a non-superconducting material in a shape of selected from wires and tapes is interposed between adjacent tapes to partially fill said gaps.

18. (Previously Canceled) Current transmission/distribution network comprising at least one superconducting cable comprising at least one layer of tapes of superconducting material circumferentially wound side by side on a support at a prefixed distance such as gaps are formed among the tapes, wherein a non-superconducitng material in a shape of selected from wires and tapes is interposed between adjacent tapes to partially fill said gaps.

19. (Previously Added) A superconducting cable comprising at least one layer of tapes of superconducting material circumferentially wound side by side on a support at a prefixed distance so that gaps are circumferentially formed between adjacent tapes, wherein a non-superconducting material is interposed between the adjacent tapes to partially fill the gaps.

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20. (Previously Added) The superconducting cable according to claim 19 wherein the non-superconducting material comprises at least one of tapes and wires.

21. (Previously Added) The superconducting cable according to claim 19 wherein the non-superconducting material has a thickness differing from that of the tapes of the superconducting material of an amount not higher than one of +/-15%, +/-10%, and +/-5%.

22. (Previously Added) The superconducting cable according to claim 19 wherein the non-superconducting material has a thickness substantially equal to that of the tapes of the superconducting material.

23. (Previously Added) The superconducting cable according to claim 19 wherein the width of the non-superconducting material is such that a gap of one of 0.1-3 mm and 0.1-2 mm remains between one tape of superconducting material and the adjacent non-superconducting material.

24. (Previously Added) The superconducting cable according to claim 19 wherein the non-superconducting material comprises at least one of plastic and metal.

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25. (Previously Added) The superconducting cable according to claim 24 wherein the non-superconducting material has amagnetic characteristics at an operative temperature.

26. (Previously Added) The superconducting cable according to claim 24 wherein the metal comprises at least one of copper, silver, gold, copper alloy, silver alloy, and gold alloy.

27. (Previously Added) The superconducting cable according to claim 19 wherein the non-superconducting material is longitudinally wound on the support or on an underlying superconducting layer, and alternated with the tapes of superconducting material.

28. (Previously Added) The superconducting cable according to claim 19 wherein the superconducting cable is disposed within at least one of a current transmission network and a current distribution network.

29. (Currently Amended) A superconducting cable comprising:

a phase conductor including at least a first layer of tapes of superconducting material circumferentially wound side by side on a support at a first prefixed distance so that first gaps are circumferentially formed between adjacent tapes of the phase conductor <u>wherein a non-superconducting material is interposed between the adjacent tapes to partially fill the first gaps</u>; <u>and</u>

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a return conductor including at least a second layer of tapes of superconducting material circumferentially wound on a support side by side at a second prefixed distance so that second gaps are circumferentially formed between adjacent tapes of the return conductor.

30. (Previously Added) The superconducting cable according to claim 29 wherein a non-superconducting material is present among at least one of the tapes of superconducting material and the tapes of the return conductor.

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IN THE DRAWINGS:

Subject to the Examiner's approval, please substitute FIGs. 1-3 and 5 (4 sheets) with the attached substitute FIGs. 1-3 and 5 (4 sheets).

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